

Q1
Cand front electrode 9. The ion mirror 5 also comprises a first end 21 for receiving and transmitting ions substantially along the longitudinal axis 19 of the ion mirror 5, and second end 22 that is closed ended. As described above, the second end 22 is closed ended by attachment of the back plate 35.--

Page 7, line 22, delete the paragraph beginning "Referring to FIGS. 1-3..." and substitute the following paragraph:

Q2
-- Referring to FIGS. 1-3, the electrodes 9, 11 and 13 are integral to the flight tube 8. Each of the electrodes 9, 11 and 13 is designed for receiving ions and creating an electric fields that retards and reflects ions back towards the flight tube 8 and the ion detector 7. The ion mirror 5 has internal conducting segments L1, L2 and L3, L1, L2 and L3 define the length of the electrodes 9, 11 and 13, respectively. Segment L1 is extended past the grid frame 31. L1 and L2 are approximately similar in size and shape. The electrodes 9 and 11, 11 and 13 are separated by first space 12 and second space 14 respectively. The lengths of L1, L2 and L3 may be altered to produce varying electric fields. Segment L2 has its electrical connection by means of a single hole in the flight tube 8 (not shown in FIGS.). L3 serves as the rear segment and is in electrical contact with the back plate 35. The invention and segment design, number, size and material (resistive or conductive) can be varied to suit conventional multi-segment designs or new layouts as needed. In addition, the aspects of the invention may be applied or are applicable to other components like the ion pulser 4 which is traditionally built from a "stack" of separate parts like the mirror, and charged particle lenses (e.g. Einzel lenses) and deflectors etc. The above invention also has application in ion mobility spectrometers.--